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10 CFR 50.90

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United States Nuclear Regulatory Commission
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Washington, DC 20555

SALEM GENERATING STATION – UNIT 1 AND UNIT 2
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR 75
NRC DOCKET NOS. 50-272 AND 50-311

Subject: **LICENSE AMENDMENT REQUEST (LAR) S09-06 REVISION TO TECHNICAL SPECIFICATION 4.0.5, SURVEILLANCE REQUIREMENTS FOR INSERVICE INSPECTION AND TESTING OF ASME CODE COMPONENTS**

In accordance with the provisions of 10 CFR 50.90, PSEG Nuclear, LLC (PSEG) hereby requests an amendment of the Technical Specifications (TS) for Salem Generating Station Unit 1 and Unit 2.

This license amendment request proposes changes for consistency with the requirements of 10 CFR 50.55a(f)(4) for inservice testing of pumps and valves, and removes TS requirements that are redundant to the requirements of 10 CFR 50.55a. TS 4.0.5 would be revised consistent with NRC-approved Technical Specification Task Force (TSTF) Travelers TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a," TSTF 497, Revision 0," Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less," and NUREG-1431, "Standard Technical Specifications, Westinghouse Plants, Revision 3.0."

PSEG has determined that this LAR does not involve a significant hazard consideration as determined per 10 CFR 50.92. PSEG's technical and regulatory evaluation of this LAR, the TS changes, and the TS Bases changes (for information only), are provided in Attachments 1, 2 and 3. There are no regulatory commitments contained in this submittal.

The changes in this LAR are not required to address an immediate safety concern. PSEG requests approval of this LAR no later than October 30, 2010. Once approved, the amendment will be implemented within 60 days from the date of issuance.

A047
NRR

Should you have any questions regarding this submittal, please contact Mr. Jeff Keenan at (856) 339-5429.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 9/23/09
(Date)

Sincerely,

Robert C. Braun
Site Vice President
Salem Generating Station

Attachments (3)

CC

S. Collins, Regional Administrator - NRC Region I
R. Ennis, Project Manager - USNRC
NRC Senior Resident Inspector - Salem
P. Mulligan, Manager IV, NJBNE
Commitment Coordinator - Salem
PSEG Corporate Commitment Manager

SALEM GENERATING STATION - UNIT 1 and Unit 2
DOCKET NOS. 50-272 and 50-311
LICENSE AMENDMENT REQUEST LAR S09-06
REVISION TO TECHNICAL SPECIFICATION 4.0.5, SURVEILLANCE REQUIREMENTS FOR INSERVICE INSPECTION AND TESTING OF ASME CODE COMPONENTS

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1.0 DESCRIPTION

This submittal requests an amendment to Technical Specification (TS) 4.0.5 of Facility Operating License Nos. DPR-70 and DPR-75, Salem Units 1 and 2. TS 4.0.5, Surveillance Requirements for Inservice Inspections and Testing of ASME Code Components, would be revised to (1) update references to the source of requirements for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves and (2) to address the applicability of Surveillance Requirement (SR) 4.0.2 to some non-standard pump and valve testing frequencies. In addition, the revised inservice testing requirements would be relocated to Section 6.0 of TS, while the inservice inspection requirements would be removed from TS as they are redundant to the existing 10 CFR 50.55a ISI Program. The proposed changes are consistent with[1] NRC-approved Technical Specification Task Force (TSTF) Travelers TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a," (Reference 1), TSTF 497, Revision 0, " Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less," (Reference 2), and NUREG-1431, "Standard Technical Specifications (STS), Westinghouse Plants, Revision 3.0".

2.0 PROPOSED CHANGE

The proposed changes to TS 4.0.5 would provide consistency with (i) TSTF 479, (ii) TSTF 497, and (iii) NUREG-1431:

(i) TSTF-479 updates references for Inservice Testing of ASME Code Components, providing consistency with the requirements of 10 CFR 50.55a(f)(4) for pumps and valves which are classified as American Society of Mechanical Engineers (ASME) Code Class 1, Class 2 and Class 3. The specification is revised to indicate that the Inservice Testing Program shall include testing frequencies applicable to the ASME Code for Operations and Maintenance (ASME OM Code), replacing the current reference to ASME Section XI.

(ii) TSTF-497 revises TS 4.0.5 to indicate that there may be some frequencies specified as 2 years or less in the Inservice Testing (IST) Program to which the provisions of SR 4.0.2 are applicable.

(iii) NUREG-1431 relocates the Inservice Testing (IST) Program portion of TS 4.0.5 to Section 6.0 of the TS (Administrative Controls) and removes the Inservice Inspection (ISI) Program from TS. The NUREG also removes the superfluous statement that the inservice requirements are in addition to other required surveillances and further clarifies that the provisions of SR 4.0.3 are applicable to the IST Program. Other TS that currently reference TS 4.0.5 are accordingly revised to reference the IST or ISI Programs as appropriate.

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[1] The changes are consistent with both TSTF-479 and TSTF-497; however, since Salem does not have Improved Standard Technical Specifications (ISTS), NUREG-1431, the impacted TS at Salem are not numbered the same as ISTS, and have minor wording differences. In the Salem TS the IST program is currently TS 4.0.5 (vs. 5.5.8 in ISTS), and the surveillance frequency extension allowance is TS 4.0.2 (vs. 3.0.2 in ISTS).

The specific changes to 4.0.5, additions and deletions, are provided below (see Attachment 2 for complete marked up TS pages):

TS 4.0.5.a will be deleted and replaced with new TS 6.8.4.j:

Inservice Testing Program

This Program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

~~Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).~~

TS 4.0.5.b, which will be relocated as TS 6.8.4.j.a is revised to state:

~~Surveillance Intervals specified in~~ Testing frequencies applicable to~~Section XI of~~ the ASME Code for Operation and Maintenance of Nuclear Power Plants (ASME OM Code) ~~Boiler and Pressure Vessel Code~~ and applicable Addenda ~~for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable~~ as follows ~~in these Technical Specifications~~:

ASME OM ~~Boiler and Pressure Vessel~~ Code and applicable Addenda terminology for inservice ~~inspection and~~ testing activities	Required Frequencies for performing inservice ~~inspection and~~ testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days.
Biennially or every 2 years	At least once per 731 days

TS 4.0.5.c, which will be relocated as TS 6.8.4.j.b is revised to state:

The provision of Specification 4.0.2 are applicable to the above required frequencies ~~for performing inservice inspection~~ and ~~testing activities.~~ to other normal and accelerated frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities,

TS 4.0.5.d, which will be relocated as TS 6.8.4.j.c is revised to state:

> ~~Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements~~. The provisions of Specification 4.0.3 are applicable to inservice testing activities, and

TS 4.0.5.e, which will be relocated as TS 6.8.4.j.d is revised to state:

> Nothing in the ASME ~~Boiler and Pressure Vessel~~ OM Code shall be construed to supersede the requirements of any Technical Specification.

Sections of the TS Bases are also revised (see Attachment 3) for consistency with the requirements of 10 CFR 50.55a(f)(4). The changes to the affected TS Bases pages will be incorporated in accordance with TS 6.17 (Salem Unit 1) and TS 6.16 (Salem Unit 2), "Technical Specifications (TS) Bases Control Program."

3.0 BACKGROUND

The purpose of the IST Program is to assess the operational readiness of pumps and valves, to detect degradation that might affect component operability, and to maintain safety margins with provisions for increased surveillance and corrective action. 10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear powered facility. Section XI of the ASME Code has been revised on a continuing basis over the years to provide updated requirements for the inservice inspection and inservice testing of components. Until 1990, the ASME Code requirements addressing the inservice testing of pumps and valves were contained in Section XI, Subsections IWP (pumps) and IWV (valves). Subsequently, the ASME OM Code replaced Section XI of the Boiler and Pressure Vessel Code for inservice testing of pumps and valves. As identified in NRC SECY-99-017 (Reference 4), the NRC has generally considered evolution of the ASME Code to result in a net improvement in the measures for inspecting piping and components and testing pumps and valves. By final rule issued on September 22, 1999 (Reference 5), the NRC amended 10 CFR 50.55a(f)(4)(ii) to require licensees to update their IST Program to the latest approved edition of the ASME OM Code incorporated by Reference 5 into 10 CFR 50.55a(b).

TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a," revised the Inservice Testing Program to reflect the latest NRC-approved version of the ASME Code. TSTF-479 also revised the surveillance extension paragraph of the Inservice Testing Program to state, "The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal and accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities." The NRC approved TSTF-479 (Reference 7) as an administrative change to the Improved Standard Technical Specifications (ISTS) NUREGs. TSTF-479 was incorporated into Revision 3.0 of the ISTS NUREGs.

Subsequently, members of the Component Branch of the NRC stated that TSTF-479 did not provide an adequate justification for applying SR 3.0.2 to Frequencies

specified in the Inservice Testing Program as greater than 2 years and the NRC would not approve plant-specific amendments based on TSTF-479 incorporating this change without further justification. The NRC stated that they would accept applying SR 3.0.2 to IST Frequencies not listed in the Inservice Testing Program table provided that those Frequencies are specified in the Inservice Testing Program as 2 years or less. Consequently, TSTF 497, Revision 0, " Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less," was developed to address the "2 years or less" provision, and was subsequently approved by the NRC (Reference 8).

The ISTS were developed based on the criteria in the Final Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132), which was subsequently codified by changes to Section 36 of Part 50 of Title 10 of the Code of Federal Regulations (10 CFR 50.36) (60 FR 36953). Licensees are encouraged to upgrade their technical specifications consistent with those criteria and conforming, to the practical extent, to Revision 3 to the improved STS. Licensees adopting portions of the improved STS to existing technical specifications should adopt all related requirements, as applicable, to achieve a high degree of standardization and consistency.

4.0 TECHNICAL ANALYSIS

TS 4.0.5 currently references the ASME Boiler and Pressure Vessel Code, Section XI, as the source of the IST Program requirements for ASME Code 1, 2, and 3 components. The ASME OM Code replaced Section XI of the Boiler and Pressure Vessel Code for inservice testing of pumps and valves. The ASME OM Code applies to the current 10-year IST Interval at Salem. The proposed changes to TS 4.0.5 will provide consistency with the IST requirements of 10 CFR 50.55a.

Additionally, TS 4.0.5 is revised to indicate that the provisions of SR 4.0.2 are applicable to other IST Frequencies that are not specifically listed in the testing frequencies identified in TS 4.0.5. The IST Program may have frequencies (normal and accelerated) for testing that are based on risk or other factors and do not conform to the standard testing Frequencies specified in TS 4.0.5. The Frequency of the Surveillance may be determined through a mix of risk informed and performance based means in accordance with the IST Program. Application of SR 4.0.2 to other IST Frequencies specified as 2 years or less is consistent with the guidance in NUREG-1482, paragraph 3.1.3 (Reference 6). Consequently, the 25 percent tolerance specified in SR 4.0.2 is applicable to any IST Frequency specified as 2 years or less.

Relocation of the IST Program portion of TS 4.0.5 to Section 6.0 of TS is consistent with ISTS, NUREG-1431. NUREG-1431 established that the IST Program is appropriately located in Section 5.0, "Administrative Controls" (Section 6.0 for Salem). The NUREG also removed the superfluous statement that the inservice requirements are in addition to other required surveillances and further clarifies that

the provisions of SR 4.0.3 are applicable to the IST Program (consistent with NUREG-1431, Section 5.5.8.c).

Similarly, NUREG-1431 established that the ISI Program was not required to be maintained in TS (i.e., it did not meet the requirements of 10 CFR 50.36). During each ISI 10-year interval, 10 CFR 50.55a(g)(4) requires PSEG to meet the ISI requirements for ASME Code Class 1, Class 2 and Class 3 components set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code and Addenda that are incorporated by reference in 10 CFR 50.55a(b) 12 months before the start of the interval. The ISI requirements in current TS SR 4.0.5 are identical and redundant to the requirements of 10 CFR 50.55a. The proposed change does not eliminate any inservice inspections; they are covered by the existing ISI Program required by 10 CFR 50.55a. For inspections determined to be impractical, PSEG will still be required to seek relief in accordance with 10 CFR 50.55a(g)(5).

5.0 REGULATORY SAFETY ANALYSIS

The proposed changes revise the requirements in TS 4.0.5, Surveillance Requirements for Inservice Inspections and Testing of ASME Code Components. TS 4.0.5, would be revised to (1) update references to the source of requirements for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves and (2) to address the applicability of Surveillance Requirement (SR) 4.0.2 to some pump and valve testing frequencies. In addition, the revised inservice testing requirements would be relocated to Section 6.0 of TS, while the inservice inspection requirements would be removed. The proposed changes are consistent with NRC-approved Technical Specification Task Force (TSTF) Travelers TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a," (Reference 1), TSTF 497, Revision 0, " Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less," (Reference 2), and NUREG-1431, "Standard Technical Specifications (STS), Westinghouse Plants, Revision 3.0".

5.1 Significant Hazards Consideration

PSEG has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes revise TS 4.0.5, Surveillance Requirements for Inservice Inspections and Testing of ASME Code Components, for consistency with of 10 CFR 50.55a(f)(4) requirements regarding inservice testing of pumps and valves. The proposed change incorporates revisions to the ASME OM Code and clarifies testing

frequency requirements for testing pumps and valves. The proposed change also relocates the ISI and IST Programs consistent with NUREG-1431.

The proposed changes do not impact any accident initiators or analyzed events or assumed mitigation of accident or transient events. They do not involve the addition or removal of any equipment, or any design changes to the facility.

Therefore, the proposed changes do not represent a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed changes do not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or change in the methods governing normal plant operation. The proposed change will not impose any new or different requirements or introduce a new accident initiator, accident precursor, or malfunction mechanism. Therefore, this proposed change does not create the possibility of an accident of a different kind than previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed changes revises and relocates TS 4.0.5, Surveillance Requirements for Inservice Inspections and Testing of ASME Code Components, for consistency with (1) the requirements of 10 CFR 50.55a(f)(4) regarding the inservice testing of pumps and valves and (2) NUREG-1431. The proposed change updates references to the ASME OM Code, clarifies testing frequency requirements for testing pumps and valves, and relocates the IST Program to Section 6.0 of TS, and the ISI Program to a licensee controlled document. The safety function of the affected pumps and valves will be maintained; the programs will continue to be implemented with the required regulations and codes.

Therefore, this proposed change does not involve a significant reduction in a margin of safety.

Based on the above, PSEG concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

NRC regulation, 10 CFR 50.55a, defines the requirements for applying industry codes to each licensed nuclear powered facility. The regulations require that during successive 120-month intervals, programs be developed utilizing the latest edition and addenda incorporated into paragraph (b) of 10 CFR 50.55a 12 months before the start of the 120-month interval of the operating license subject to the limitations and modifications identified in paragraph (b).

Section 50.55a(f)(4) of Title 10 of the *Code of Federal Regulations* (10 CFR), requires, in part, that ASME Class 1, 2, and 3 components must meet the requirements of the ASME Code. Section 50.55a(f)(4)(ii) requires that IST programs be revised every 10 years (120-months) to comply with the requirements of the latest edition and addenda of the ASME Code that is incorporated by reference in 10 CFR 50.55a(b)(3). Section 50.55a(f)(5)(ii) requires that, if a revised IST program for a facility conflicts with the TS for that facility, the licensee shall apply to the Nuclear Regulatory Commission (NRC or Commission) for amendment of the TS to conform the TS to the revised program. The licensee is required to submit the application, at least 6 months before the start of the period during which the provisions become applicable, in accordance with 10 CFR 50.55a(f)(4).

There are no changes being proposed that would result in non-compliance with any of the regulatory requirements. The evaluations documented above confirm that PSEG will continue to comply with all applicable regulatory requirements.

5.3 Precedent

The NRC accepted TSTF-479 in December 2005 (Reference 7) and TSTF-497 in October 2006 (Reference 8). A similar TS change was approved for the Shearon Harris Nuclear Power Plant in Amendment 127 on June 12, 2008, for the Wolf Creek Generating Station in Amendment 172 on November 15, 2006, and for the Cooper Nuclear Station in Amendment No. 223 on September 6, 2006.[2].

5.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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2 Even though TSTF-497 was not approved at this time, this amendment addressed the application of SR 4.0.2 to other IST Frequencies with the same wording that is now included in the approved TSTF-497

6.0 ENVIRONMENTAL CONSIDERATION

PSEG has evaluated the proposed amendment for environmental considerations. The review has determined that the proposed amendment would change requirements with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, and would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a"

2. Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-497, Revision 0, "Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less"

3. ASME Operation and Maintenance Code for Operation and Maintenance of Nuclear Power Plants, 2001 Edition including the OMa-2002 and OMb-2003 Addenda

4. SECY-99-017, "Proposed Amendment to 10 CFR 50.55a," January 13, 1999

5. Federal Register Notice: Industry Codes and Standards; Amended Requirements, published September 22, 1999 (64 FR 51370)

6. NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants," January 2005

7. Letter dated December 6, 2005, from USNRC to Technical Specifications Task Force

8. Letter dated October 4, 2006, from USNRC to Technical Specifications Task Force

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

Facility Operating License DPR-70

Technical Specification	Page
4.0.5	3/4 0-2a, 3
4.1.2.3	3/4 1-10
4.1.2.4	3/4 1-11
4.4.2.1	3/4 4-4
4.4.2.2	3/4 4-4a
4.4.3.1	3/4 4-5a
4.4.6.3	3/4 4-16a
4.4.9.3.1.d	3/4 4-31
3.4.4.10	3/4 4-33
4.5.2.f	3/4 5-5a
4.6.2.1.b	3/4 6-9
4.6.3.1.4	3/4 6-13
4.7.1.1	3/4 7-1
4.7.1.5	3/4 7-10
4.7.9	3/4 7-28
4.9.8.2	3/4 9-8a
6.10	6-26
6.8.4.j (new)	6-19e (new)

Facility Operating License DPR-75

Technical Specification	Page
4.0.5	3/4 0-2a, 3
4.1.2.3	3/4 1-9
4.1.2.4	3/4 1-10
4.4.2.1	3/4 4-5
4.4.3	3/4 4-6
4.4.5.1	3/4 4-8a
4.4.7.2	3/4 4-18
4.4.10.3.1.d	3/4 4-32
3/4.4.11	3/4 4-33
4.5.2.f	3/4 5-6
4.6.2.1.b	3/4 6-10
4.6.3.4	3/4 6-15
4.7.1.1	3/4 7-1
4.7.1.5	3/4 7-10
4.7.9	3/4 7-23
4.9.8.2	3/4 9-9
6.10	6-26
6.8.4.j (new)	6-19g (new)

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other specified conditions in the Applicability for individual Limiting Conditions for Operation, unless otherwise stated in the Surveillance Requirement. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified frequency shall be failure to meet the Limiting Condition for Operation, except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered.

4.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

~~4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:~~

~~a. Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).~~

~~b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:~~

SURVEILLANCE REQUIREMENTS

~~ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities~~	~~Required frequencies for performing inservice inspection and testing activities~~
~~Weekly~~	~~At least once per 7 days~~
~~Monthly~~	~~At least once per 31 days~~
~~Quarterly or every 3 months~~	~~At least once per 92 days~~
~~Semiannually or every 6 months~~	~~At least once per 184 days~~
~~Every 9 months~~	~~At least once per 276 days~~
~~Yearly or annually~~	~~At least once per 366 days~~

~~c. The provision of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.~~

~~d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.~~

~~e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.~~

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 At least one charging pump in the boron injection flow path required by Specification 3.1.2.1 shall be OPERABLE.[#]

APPLICABILITY: MODES 4, 5 and 6.

ACTION:

With no charging pump OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until one charging pump is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.3 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

[#] A maximum of one centrifugal charging pump shall be OPERABLE while in MODE 4 when the temperature of one or more of the RCS cold legs is less than or equal to 312°F, MODE 5, or MODE 6 when the head is on the reactor vessel.

CHARGING PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.4 At least two charging pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With only one charging pump OPERABLE, restore at least two charging pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to at least 1% $\Delta k/k$ at 200°F within the next 6 hours; restore at least two charging pumps to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.4 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

3/4.4.2 SAFETY VALVES

SAFETY VALVES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2.1 A minimum of one pressurizer code safety valve shall be OPERABLE* with a lift setting of 2485 psig ± 3%.**,***

APPLICABILITY: Mode 4 and 5

ACTION:

With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE RHR loop into operation in the shutdown cooling mode.

SURVEILLANCE REQUIREMENTS

4.4.2.1 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

* While in Mode 5, an equivalent size vent pathway may be used provided that the vent pathway is not isolated or sealed.

** The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

*** Following testing the lift setting shall be reset to within ± 1%.

3/4.4.2 SAFETY VALVES

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.2.2 All pressurizer code safety valve shall be OPERABLE with a lift setting of 2485 psig ± 3%.*,**

APPLICABILITY: MODES 1, 2 and 3.

ACTION:
With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes, or be in HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.2.2 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

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* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

** Following testing the lift setting shall be reset to within ± 1%.

3/4.4.3 RELIEF VALVES

SURVEILLANCE REQUIREMENTS

4.4.3.1 In addition to the requirements of ~~Specification 4.0.5~~ the Inservice Testing Program, each PORV shall be demonstrated OPERABLE at least once per 18 months by:

a. Operating the PORV through one complete cycle of full travel during MODES 3 or 4, and

b. Operating solenoid valves, air control valves, and check valves on associated air accumulators in PORV control systems through one complete cycle of full travel, and

c. Performing a CHANNEL CALIBRATION of the actuation instrumentation.

4.4.3.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel unless the block valve is closed in order to meet the requirements of ACTION b, or c in Specification 3.4.3.

PRIMARY COOLANT SYSTEM PRESSURE ISOLATION VALVES LIMITING CONDITION FOR OPERATION

3.4.6.3 Reactor Coolant System Pressure Isolation Valves specified in table 4.4-3 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION: With any Reactor Coolant System Pressure Isolation Valve leakage greater than the specified limit in Table 4.4-3, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two closed manual or deactivated automatic valves, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.3 Each Reactor Coolant System Pressure Isolation Valve specified in Table 4.4-3 shall be demonstrated OPERABLE pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program, except that in lieu of any leakage testing required by ~~Specification 4.0.5~~ the Inservice Testing Program, each valve shall be demonstrated OPERABLE by verifying leakage to be within its limit:

a. At least once per 18 months.

b. Prior to entering MODE 2 whenever the plant has been in COLD SHUTDOWN for 72 hours or more and if leakage testing has not been performed in the previous 9 months.

c. Prior to returning the valve to service following maintenance repair or replacement work on the valve.

d. For the Residual Heat Removal and Safety Injection Systems hot and cold leg injection valves and accumulator valves listed in Table 4.4-3 the testing will be done within 24 hours following valve actuation due to automatic or manual action or flow through the valve. For all other systems testing will be done once per refueling.

The provisions of specification 4.0.4 are not applicable for entry into MODE 3 or 4.

SURVEILLANCE REQUIREMENTS

4.4.9.3.1 Each POPS shall be demonstrated OPERABLE by:

a. Performance of a CHANNEL FUNCTIONAL TEST on the POPS actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the POPS is required OPERABLE, and at least once per 31 days thereafter when the POPS is required OPERABLE.

b. Performance of a CHANNEL CALIBRATION on the POPS actuation channel at least once per 18 months.

c. Verifying the POPS isolation valve is open at least once per 72 hours when the POPS is being used for overpressure protection.

d. Testing pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

4.4.9.3.2 The RCS vent(s) shall be verified to be open at least once per 12 hours* when the vents(s) is being used for overpressure protection.

*Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

SURVEILLANCE REQUIREMENTS (Continued)

In addition to the requirements of ~~Specification 4.0.5~~ the Inservice Inspection Program, each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975. In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at 20 year intervals.

4.4.10.1.2 Augmented Inservice Inspection Program for Steam Generator Channel Heads - The steam generator channel heads shall be ultrasonically inspected during each of the first three refueling outages using the same ultrasonic inspection procedures and equipment used to generate the baseline data. These inservice ultrasonic inspections shall verify that the cracks observed in the stainless steel cladding prior to operation have not propagated into the base material. The stainless steel clad surfaces of the steam generator channel heads shall also be visually inspected during the above outages. This may be accomplished by direct visual examination or by remote means such as television camera. If the visual examination, either direct or remote, reveals detectable cladding indications, a record shall be made by means of a video tape recording or photographs for comparison purposes.

f. By verifying that each of the following pumps develops the indicated Total Dynamic Head (TDH) when tested at the test flow point pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program:

1. Centrifugal charging pump ≥ 2338 psi TDH

2. Safety Injection Pump ≥ 1369 psi TDH

3. Residual heat removal pump ≥ 165 psi TDH

g. By verifying the correct position of each of the following ECCS throttle valves:

1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE.

2. At least once per 18 months.

HPSI SYSTEM VALVE NUMBER	LPSI SYSTEM VALVE NUMBER
11 SJ 16	11 SJ 138
12 SJ 16	12 SJ 138
13 SJ 16	13 SJ 138
14 SJ 16	14 SJ 138
	11 SJ 143
	12 SJ 143
	13 SJ 143
	14 SJ 143

h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

1. For Safety Injection pumps, with a single pump running:

a) The sum of the injection line flow rates, excluding the highest flow rate, is ≥ 453 gpm; and

b) The total flow rate through all four injection lines is ≤ 647 gpm, and

c) The difference between any pair of injection line flow rates is ≤ 12.0 gpm, and

d) The total pump flow rate is ≤ 664 gpm in the cold leg alignment, and

e) The total pump flow rate is ≤ 654 gpm in the hot leg alignment.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the RHR pump discharge.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 204 psid when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

c. At least once per 18 months during shutdown, by:

   1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment High-High pressure test signal.

   2. Verifying that each spray pump starts automatically on a Containment High-High pressure test signal.

d. Following activities that could result in nozzle blockage, either evaluate the work performed to determine the impact to the containment spray system, or perform an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Not used.

d. Verifying that on a Containment Purge and Pressure-Vacuum Relief isolation test signal, each required Purge and each Pressure-Vacuum Relief valve actuates to its isolation position.

e. Verifying that the Containment Pressure-Vacuum Relief Isolation valves are limited to = 60%opening angle.

4.6.3.1.3 At least once per 18 months, verify that on a main steam isolation test signal, each main steam isolation valve actuates to its isolation position.

4.6.3.1.4 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

4.6.3.1.5 Each required containment purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2.b for all other Type B and C penetrations, the combined leakage rate is less than or equal to 0.60La.

4.6.3.1.6 A pressure drop test to identify excessive degradation of resilient valve seals shall be conducted on the:

a. Required Containment Purge Supply and Exhaust Isolation Valves at least once per 6 months.

b. Deleted.

4.6.3.1.7 The required containment purge supply and exhaust isolation valves shall be determined closed at least once per 31 days.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves (MSSVs) associated with each steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With three main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify each required MSSV lift setpoint per Table 4.7-1. No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODES 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours;

otherwise, be in MODE 2 within the next 6 hours.

MODES 2 and 3 - With one or more main steam line isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may proceed provided;

a. The isolation valve(s) is (are) maintained closed, and

b. The isolation valve(s) is (are) verified closed once per 7 days.

Otherwise, be in MODE 3, HOT STANDBY, within the next 6 hours, and MODE 4, HOT SHUTDOWN, within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program. The provisions of Specification 4.0.4 are not applicable.

3/4.7.9 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.9 All snubbers shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours, replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.9c on the supported component or declare the supported system inoperable and follow appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.9 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program, in addition to the regular Inservice Inspection Program requirements ~~of Specification 4.0.5~~.

a. Visual Inspection

All snubbers shall be categorized into two groups: those accessible and those inaccessible during reactor operation. The visual inspection interval for each category of snubbers shall be determined based upon the criteria provided in Table 4.7-3.

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent Residual Heat Removal (RHR) loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when water level above the top of the reactor pressure vessel flange is less than 23 feet.

ACTION:

a. With less than the required RHR loops operable, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required Residual Heat Removal loops shall be determined OPERABLE per ~~Specification 4.0.5~~ the Inservice Testing Program.

* Systems supporting RHR loop operability may be excepted as follows:

a. The normal or emergency power source may be inoperable.

c. Records of radiation exposure for all individuals entering radiation control areas.

d. Records of gaseous and liquid radioactive material released to the environs.

e. Records of transient or operational cycles for those facility components identified in Table 5.7-1.

f. Records of reactor tests and experiments.

g. Records of training and qualification for current members of the plant staff.

h. Records of in-service inspections ~~performed pursuant to these Technical Specifications~~.

i. Records of Quality Assurance activities required by the QA Manual.

j. DELETED

k. Records of SORC meetings and activities of the Nuclear Review Board (and activities of its predecessor, the Offsite Safety Review (OSR) staff.)

l. Records for Environmental Qualification which are covered under the provisions of Paragraph 6.16.

m. Records of the service lives of all hydraulic and mechanical snubbers including the date at which the service life commences and associated installation and maintenance records.

n. Records of secondary water sampling and water quality.

o. Records of analyses required by the radiological environmental monitoring program which would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.

p. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.8.4.j INSERVICE TESTING PROGRAM

This Program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

a. Testing frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:

ASME OM Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

b. The provisions of Specification 4.0.2 are applicable to the above required frequencies and to other normal and accelerated frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities,

c. The provisions of Specification 4.0.3 are applicable to inservice testing activities, and

d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any Technical Specification.

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL MODES or other specified conditions in the Applicability for individual Limiting Conditions for Operation, unless otherwise stated in the Surveillance Requirement. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified frequency shall be failure to meet the Limiting Condition for Operation, except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified frequency, then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met and the applicable Actions must be entered.

4.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 4.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

~~4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:~~

~~a. Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).~~

~~b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:~~

SURVEILLANCE REQUIREMENTS(Continued)

~~ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities~~	~~Required frequencies for performing inservice inspection and testing activities~~
~~Weekly~~	~~At least once per 7 days~~
~~Monthly~~	~~At least once per 31 days~~
~~Quarterly or every 3 months~~	~~At least once per 92 days~~
~~Semiannually or every 6 months~~	~~At least once per 184 days~~
~~Every 9 months~~	~~At least once per 276 days~~
~~Yearly or annually~~	~~At least once per 366 days.~~

~~c. The provision of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.~~

~~d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.~~

~~e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.~~

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 At least one charging pump in the boron injection flow path required by Specification 3.1.2.1 shall be OPERABLE.#

APPLICABILITY: MODES 4, 5 and 6.

ACTION:

With no charging pump OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until one charging pump is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.3 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

A maximum of one centrifugal charging pump shall be OPERABLE while in MODE 4 when the temperature of one or more of the RCS cold legs is less than or equal to 312°F, MODE 5, or MODE 6 when the head is on the reactor vessel.

CHARGING PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.4 At least two charging pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With only one charging pump OPERABLE, restore at least two charging pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY and borated to a SHUTDOWN MARGIN equivalent to at least 1% delta k/k at 200°F within the next 6 hours; restore at least two charging pumps to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.4 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

3/4.4.2 SAFETY VALVES

SAFETY VALVES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE* with a lift setting of 2485 psig ± 3%.**,***

APPLICABILITY: Mode 4 and 5

ACTION:

With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE RHR loop into operation in the shutdown cooling mode.

SURVEILLANCE REQUIREMENTS

4.4.2.1 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

* While in Mode 5, an equivalent size vent pathway may be used provided that the vent pathway is not isolated or sealed.

** The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

*** Following testing the lift setting shall be reset to within ± 1%.

3/4.4.3 SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of 2485 psig ± 3%.*,**

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

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* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

** Following testing the lift setting shall be reset to ± 1%.

3/4.4.5 RELIEF VALVES

SURVEILLANCE REQUIREMENTS

4.4.5.1 In addition to the requirements of ~~Specification 4.0.5~~ the Inservice Testing Program, each PORV shall be demonstrated OPERABLE at least once per 18 months by:

a. Operating the PORV through one complete cycle of full travel during MODES 3 or 4, and

b. Operating solenoid valves, air control valves, and check valves on associated air accumulators in PORV control systems through one complete cycle of full travel, and

c. Performing a CHANNEL CALIBRATION of the actuation instrumentation.

4.4.5.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel unless the block valve is closed in order to meet the requirements of ACTION b, or c in Specification 3.4.5.

c*. Verifying primary-to-secondary leakage is = 150 gallons per day through any one steam generator at least once per 72 hours during steady state operation,

d*. Performance of a Reactor Coolant System water inventory balance** at least once per 72 hours. The water inventory balance shall be performed with the plant at steady state conditions. The provisions of specification 4.0.4 are not applicable for entry into Mode 4, and

e. Monitoring the reactor head flange leakoff system at least once per 24 hours.

4.4.7.2.2 Each Reactor Coolant System Pressure Isolation Valve specified in Table 3.4-1 shall be demonstrated OPERABLE pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program, except that in lieu of any leakage testing required by ~~Specification 4.0.5~~ the Inservice Testing Program, each valve shall be demonstrated OPERABLE by verifying leakage to be within its limit:

a. At least once per 18 months.

b. Prior to entering MODE 2 whenever the plant has been in COLD SHUTDOWN for 72 hours or more and if leakage testing has not been performed in the previous 9 months.

c. Prior to returning the valve to service following maintenance repair or replacement work on the valve.

b. For the Residual Heat Removal and Safety Injection Systems hot and cold leg injection valves and accumulator valves listed in Table 3.4-1 the testing will be done within 24 hours following valve actuation due to automatic or manual action or flow through the valve. For all other systems testing will be done once per refueling.

The provisions of specification 4.0.4 are not applicable for entry into MODE 3 or 4.

**Not required to be completed until 12 hours after establishment of steady state operation.*

***Not applicable to primary-to-secondary leakage.*

SURVEILLANCE REQUIREMENTS (Continued)

a. Performance of a CHANNEL FUNCTIONAL TEST on the POPS actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the POPS is required OPERABLE and at least once per 31 days thereafter when the POPS is required OPERABLE.

b. Performance of a CHANNEL CALIBRATION on the POPS actuation channel at least once per 18 months.

c. Verifying the POPS isolation valve is open at least once per 72 hours when the POPS is being used for overpressure protection.

d. Testing pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

4.4.10.3.2 The RCS vent(s) shall be verified to be open at least once per 12 hours* when the vent(s) is being used for overpressure protection.

*Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

3.4.11 STRUCTURAL INTEGRITY

ASME CODE CLASS 1, 2 and 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

3.4.11.1 The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.4.11.1.

APPLICABILITY: ALL MODES.

ACTION:

a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature more than 50°F above the minimum temperature required by NDT considerations.

b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature above 200°F.

c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

SURVEILLANCE REQUIREMENTS

4.4.11.1 In addition to the requirements of ~~Specification 4.0.5~~ the Inservice Inspection Program, each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975. In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at 20 year intervals.

4.4.11.2 Augmented Inservice Inspection Program for Steam Generator Channel Heads - The No. 21 Steam Generator channel head shall be ultrasonically inspected in a selected area during each of the first three refueling outages using the same ultrasonic inspection procedures and equipment used to generate the baseline data. These inservice ultrasonic inspections shall verify that the cracks observed in the stainless steel cladding prior to operation have not propagated into the base material.

f. By verifying that each of the following pumps develops the indicated Total Dynamic Head (TDH) when tested at the test flow point pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program:

1. Centrifugal Charging pump ≥ 2338 psi TDH

2. Safety Injection pump ≥ 1369 psi TDH

3. Residual Heat Removal pump ≥ 165 psi TDH

g. By verifying the correct position of each of the following ECCS throttle valves:

1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE.

2. At least once per 18 months.

HPSI System Valve Number	LPSI System Valve Number
21 SJ 16	21 SJ 138
22 SJ 16	22 SJ 138
23 SJ 16	23 SJ 138
24 SJ 16	24 SJ 138
	21 SJ 143
	22 SJ 143
	23 SJ 143
	24 SJ 143

h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

1. For Safety Injection pumps, with a single pump running:

a) The sum of the injection line flow rates, excluding the highest flow rate, is ≥ 453 gpm, and

b) The total flow rate through all four injection lines is ≥ 647 gpm, and

c) The difference between any pair of injection line flow rates is ≤ 12.0 gpm, and

d) The total pump flow rate is ≤ 664 gpm in the cold leg alignment, and

e) The total pump flow rate is ≤ 654 gpm in the hot leg alignment.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the RHR pump discharge.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 204 psid when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

c. At least once per 18 months during shutdown, by:

   1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment High-High pressure test signal.

   2. Verifying each spray pump starts automatically on a Containment High-High pressure test signal.

d. Following activities that could result in nozzle blockage, either evaluate the work performed to determine the impact to the containment spray system, or perform an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 Each containment isolation valve shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. NOT USED

d. Verifying that on a Containment Purge and Pressure-Vacuum Relief isolation test signal, each required Purge and each Pressure-Vacuum Relief valve actuates to its isolation position.

e. Verifying that the Containment Pressure-Vacuum Relief Isolation valves are limited to = 60° opening angle.

4.6.3.3 At least once per 18 months, verify that on a main steam isolation test signal, each main steam isolation valve actuates to its isolation position.

4.6.3.4 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

4.6.3.5 Each required containment purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2.b for all other Type B and C penetrations, the combined leakage rate is less than or equal to 0.60La.

4.6.3.6 A pressure drop test to identify excessive degradation of resilient valve seals shall be conducted on the:

a. Required Containment Purge Supply and Exhaust Isolation Valves at least once per 6 months.

b. Deleted.

4.6.3.7 The required containment purge supply and exhaust isolation valves shall be determined closed at least once per 31 days.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves (MSSVs) associated with each steam generator shall be OPERABLE with lift settings as specified in Table 3.7-4.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With three main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify each required MSSV lift setpoint per Table 3.7-4. No additional Surveillance Requirements other than those required by ~~Specification 4.0.5~~ the Inservice Testing Program.

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODES 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours;

Otherwise, be in MODE 2 within the next 6 hours.

MODES 2 and 3 - With one or more main steam line isolation valve(s) inoperable, subsequent operation in MODES 2 or 3 may proceed provided;

a. The isolation valve(s) is (are) maintained closed, and

b. The isolation valve(s) is (are) verified closed once per 7 days.

Otherwise, be in MODE 3, HOT STANDBY, within the next 6 hours, and MODE 4, HOT SHUTDOWN, within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program. The provisions of Specification 4.0.4 are not applicable.

3/4.7.9 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.9 All snubbers shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours, replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.9c on the supported component or declare the supported system inoperable and follow appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.9 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program in addition to the regular Inservice Inspection Program requirements ~~of Specification 4.0.5~~.

a. Visual Inspection

All snubbers shall be categorized into two groups: those accessible and those inaccessible during reactor operation. The visual inspection interval for each category of snubbers shall be determined based upon the criteria provided in Table 4.7-3.

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent Residual Heat Removal (RHR) loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when water level above the top of the reactor pressure vessel flange is less than 23 feet.

ACTION:

a. With less than the required RHR loops operable, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required Residual Heat Removal loops shall be determined OPERABLE per ~~Specification 4.0.5~~ the Inservice Testing Program.

* Systems supporting RHR loop operability may be excepted as follows:

a. The normal or emergency power source may be inoperable.

c. Records of radiation exposure for all individuals entering radiation control areas.

d. Records of gaseous and liquid radioactive material released to the environs.

e. Records of transient or operational cycles for those facility components identified in Table 5.7-1.

f. Records of reactor tests and experiments.

g. Records of training and qualification for current members of the plant staff.

h. Records of in-service inspections ~~performed pursuant to these Technical Specifications~~.

i. Records of Quality Assurance activities required by the QA Manual.

j. DELETED

k. Records of SORC meetings and activities of the Nuclear Review Board (and activities of its predecessor, the Offsite Safety Review (OSR) staff).

l. Records for Environmental Qualification which are covered under the provisions of Paragraph 2.C(7) and 2.C(8) of Facility Operating License DPR-75.

m. Records of the service lives of all hydraulic and mechanical snubbers including the date at which the service life commences and associated installation and maintenance records.

n. Records of secondary water sampling and water quality.

o. Records of analyses required by the radiological environmental monitoring program which would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.

p. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.8.4.j INSERVICE TESTING PROGRAM

This Program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:

a. Testing frequencies applicable to the ASME Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) and applicable Addenda as follows:

ASME OM Code and applicable Addenda terminology for inservice testing activities	Required Frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

b. The provisions of Specification 4.0.2 are applicable to the above required frequencies and to other normal and accelerated frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities,

c. The provisions of Specification 4.0.3 are applicable to inservice testing activities, and

d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any Technical Specification.

TECHNICAL SPECIFICATION BASES PAGES WITH PROPOSED CHANGES

(Provided for INFORMATION ONLY)

~~Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.~~

~~This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.~~

~~Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL MODE or~~

~~other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, that is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~

~~Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.~~

~~This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.~~

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~~other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, that is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~